

this interesting form, is only to be reached by carefully tracing the different stages of its development, step by step, from the egg. In larvæ of this stage the membranous interval between the bases of the last-formed (seventh pair) legs and the base of the setigerous penultimate sternum is found to be divided into two segments by a transverse groove; the anterior of these segments is by far the longer, and the posterior is very short: to the extreme outer ends of the posterior margin of the latter are attached a pair of conical processes constricted at their base; they are the buds of the future eighth pair of functional legs, and they lie wedged between the setigerous processes and the caudal appendages, below (but in the same vertical line with) which they are attached. From the posterior margin of the longer and anterior of these two fresh segments, but rather nearer to the middle line, two similar, but much shorter, conical processes arise and lie appressed to the surface of the setigerous sternum; these are the buds of the future eighth pair of rudimentary legs.

The addition of fresh somites therefore takes place in this animal by the intercalation of two at each moult between the antepenultimate and penultimate sterna, as in the Chilognatha, and as also in some of the Chilopoda, as far as some, at all events, of the somites are concerned, until the full number is attained.

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## PROCEEDINGS OF LEARNED SOCIETIES.

### GEOLOGICAL SOCIETY.

April 25, 1883.—J. W. Hulke, Esq., F.R.S.,  
President, in the Chair.

The following communication was read:—

“On the Skull of *Megalosaurus*.” By Prof. R. Owen, C.B.,  
F.R.S., F.G.S.

The specimens described in this communication were obtained by Edward Cleminshaw, Esq., from the freestone of the Inferior Oolite near Sherborne (Dorset) from some blocks which had been quarried for building-purposes. These were sent by him to the British Museum, where the remains have been developed. One block includes a great proportion of the right side of the facial part of the skull, the missing parts being the fore end of the premaxillary, the suborbital end of the maxillary, and the upper hinder pointed

termination of the same bone. Ten teeth are preserved in the maxillary bone. Another block contains the outer side of the right mandibular ramus, with teeth, and with some other fragments. In a third block is the anterior part of the left mandibular ramus, with portions of the teeth. These remains were described in detail; and in conclusion the author discussed the bearing of these and other Megalosaurian remains upon our knowledge of the structure of that animal and its affinity to existing Reptilia, and criticised some of the evidence on which the relationship of the Dinosauria to birds is inferred—a relationship which he had suggested in 1841, but upon grounds which appeared to him to be more satisfactory.

May 9, 1883.—J. W. Hulke, Esq., F.R.S.,  
President, in the Chair.

The following communication was read:—

“Fossil Chilostomatous Bryozoa from Muddy Creek, Victoria.”  
By A. W. Waters, Esq., F.G.S.

In this paper the author described a collection of fossil Bryozoa, collected and sent over by Mr. J. Bracebridge Wilson, of Geelong. The collection is from Muddy Creek, Bird Rock, and Waurin Ponds, Victoria, and is of the so-called “Miocene” age. There are 64 species, of which 28 are known living; and 18 of these are now found fossil for the first time; but of the rest a large number have previously been found and described from Curdies Creek, Mount Gambier, and Bairnsdale. The author considered that 28 out of this number being known living is a large proportion, seeing that although our knowledge of the Australian recent fauna has been much increased during the last few years, it yet is very imperfect.

The collection furnished 13 species of *Catenicella*, of which 5 at least are known living; and the author indicated the great importance of a thorough study of the living species of that genus. A notch in the aperture simulating a sinus seems sometimes to be replaced by a suboral pore; and a plate on the front of the cell requires further investigation.

Three species are believed to be identical with fossils from the European chalk.

June 6, 1883.—J. W. Hulke, Esq., F.R.S.,  
President, in the Chair.

The following communication was read:—

“Notes on a Collection of Fossils and Rock-specimens from West Australia, north of the Gascoyne River.” By W. H. Hudleston, Esq., M.A., F.G.S.

This collection was forwarded to England by Mr. Forrest, who has been engaged for some time past in surveying the northern portion of the colony, and was accompanied by a map indicating the positions

whence the specimens were obtained. The author drew attention to a paper by Mr. Gregory, which appeared in the Quarterly Journal, many years ago, giving a brief description of the country as far as the Gascoyne river in lat. 25° S., together with some diagrammatic sections, which show a belt of sedimentary rocks between the sea and the crystalline plateau forming the interior of the country. This belt of sedimentary rocks widens materially towards the north, being about 90 miles across on the parallel of the Gascoyne river. Amongst the rock-specimens in the Forrest collection are crystalline schists, &c., in which white mica and quartz are the most prominent minerals; and it is evidently from the degradation of masses of this class that the arenaceous rocks containing the fossils were derived. No limestone has been sent; but where the grits are largely charged with fragments of Eocrinites, Polyzoa, &c. there is a proportionate increase of calcareous matter. No specimens of coal or of recognizable plants were forwarded.

The fossils chiefly occur in "Fossil range," which runs nearly N.N.W. for over 100 miles; they present a thoroughly Carboniferous (marine) facies, several of the species being identical with or closely allied to well-known Carboniferous Limestone forms. Out of more than 20 species there is only one (a *Pachypora*, allied to *P. cervicornis*) which could be regarded as Devonian. Corals, crinoidal stems, Polyzoa, Brachiopoda, and two large species of *Aviculopecten* make up the list. In the Appendix some of these were described. The corals are chiefly represented by *Amplexus* and *Stenopora*; whilst amongst the Polyzoa are two species of the very curious American genus *Evaetinozora*, only known hitherto from the Lower Carboniferous rocks of Illinois. The ubiquitous *Fenestella plebeia* is extremely abundant.

#### BIBLIOGRAPHICAL NOTICE.

*The Young Collector's Handbook of Shells.* By B. B. WOODWARD, F.G.S. &c. Small Svo. London: W. Swan Sonnenschein and Co.

It is not often that we feel called upon to notice a penny book; but the little treatise of which we have given the title above strikes us as so good a work of its kind as to deserve a few words of welcome. Mr. Woodward, as will be seen from the title of his little book, has set before him a very modest purpose; but he has stuck to it in the most praiseworthy manner, and in consequence has succeeded in producing what cannot but prove a most useful manual for beginners in shell-collecting. He tells his readers how to make a cheap cabinet for the reception of their collections, then how to collect the shells to put into it, how to prepare and mount them when obtained, and, lastly, how to classify and arrange their